

CLAIMS

1. An inducer of cytotoxic T cell (hereinafter, referred to as "CTL") comprising as an active ingredient a protein which comprises the same or substantially the same amino acid sequence as that shown in SEQ ID NO:

2.

2. A peptide which is a partial peptide of a protein comprising the same or substantially the same amino acid sequence as that shown in SEQ ID NO: 2 and is recognized by CTLs when bound to an HLA antigen.

3. The peptide of claim 2, wherein the HLA antigen is HLA-A24 or HLA-B55.

4. The peptide of claim 3, which comprises an amino acid sequence shown in any one of SEQ ID NO: 6 - 46.

5. The peptide of claim 3, which comprises an amino acid sequence wherein, in the sequence shown in any one of SEQ ID NO: 6-45, the amino acid residue at position 2 is substituted by tyrosine, phenylalanine, methionine or tryptophan, and/or the C terminal amino acid by phenylalanine, leucine, isoleucine, tryptophan or methionine.

6. An epitope peptide comprising a peptide of any one of claims 2 to 5.

7. An inducer of CTL comprising a peptide of any one of claims 2 to 6 as an active ingredient.

8. An inducer of CTL comprising a polynucleotide encoding a protein comprising the same or substantially the same amino acid sequence as that shown in SEQ ID NO: 2.

9. The inducer of CTL of claim 8, wherein the polynucleotide is a polynucleotide comprising a base sequence shown in SEQ ID NO: 1, position 337-1878 of SEQ ID NO: 1 or SEQ ID NO: 3.

10. A nucleic acid comprising a polynucleotide of any one of claims 2 to 6.

11. An inducer of CTL comprising the nucleic acid of claim 10.

12. A method for producing an antigen-presenting cell comprising the step of bringing a cell having antigen-presenting ability into contact with any one of following (a) to (d) *in vitro*:

5 (a) a protein comprising the same or substantially the same amino acid sequence as that shown in SEQ ID NO: 2;

(b) a nucleic acid comprising a polynucleotide encoding the protein of (a);

(c) a peptide set forth in any one of any claims 2 to 6; and

10 (d) a nucleic acid comprising a polynucleotide encoding the peptide of (c).

13. An antigen-presenting cell obtainable according to the method of 12.

14. A method for inducing a CTL comprising the step of bringing
15 peripheral lymphocyte cells into contact with any one of following (a) to (d) *in vitro*:

(a) a protein comprising the same or substantially the same amino acid sequence as that shown in SEQ ID NO: 2;

20 (b) a nucleic acid comprising a polynucleotide encoding the protein of (a);

(c) a peptide set forth in any one of claims 2 to 6; and

(d) a nucleic acid comprising a polynucleotide encoding the peptide of (c).

15. The CTL inducible according to the method of 14.

25 16. An antibody which specifically binds to the polypeptide of any one of claims 2 to 5.

17. A tumor marker comprising a polynucleotide and/or a complementary polynucleotide thereof, which polynucleotide comprises at least 15 contiguous nucleotides in the base sequence of a polynucleotide
30 encoding a protein comprising the same or substantially the same amino

acid sequence as that shown in SEQ ID NO: 2.

18. The tumor marker of claim 17, which is a polynucleotide and/or a complementary polynucleotide thereof, said polynucleotide comprising at least 15 contiguous nucleotides in the base sequence of SEQ ID NO 1 or SEQ ID NO: 3.

19. A tumor marker comprising at least 8 contiguous amino acids in the amino acid sequence of a protein comprising the same or substantially the same amino acid sequence as that shown in SEQ ID NO: 2.

20. The tumor marker of claim 19, which comprises at least 8 contiguous amino acids in the amino acid sequence shown in SEQ ID NO: 2.

21. A tumor marker comprising an antibody to a protein comprising the same or substantially the same amino acid sequence as that shown in SEQ ID NO:2, or the antibody of claim 16.

22. The tumor marker of claim 21 comprising an antibody to a protein consisting of the amino acid sequence shown in SEQ ID NO:2.

23. An HLA tetramer comprising a peptide of any one of claims 2 to 5 and an HLA antigen.

24. A tumor marker comprising the tetramer of claim 23.

25. The tumor marker of any one of claims 17-22 and 24, wherein the tumor is sarcoma or renal cancer.

26. A diagnostic agent for tumor comprising a tumor marker of any one of claims 17-22 and 24-25.